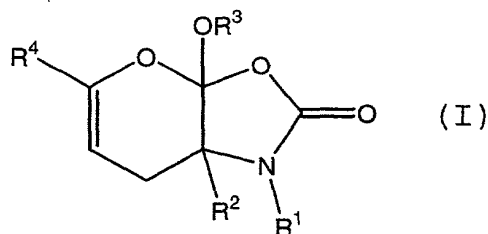


Claims:

1. A 7a-alkoxy-4H-pyrano[3,2-d]-oxazol-2(3H)-one represented by the formula (I):



wherein R¹ represents a hydrogen atom, an alkyl group, an alkenyl group, an aryl group or an aralkyl group; R² represents a hydrogen atom, an alkyl group, an alkenyl group, an aryl group or an aralkyl group; R³ represents an alkyl group, a cycloalkyl group, an alkenyl group, an aryl group or an aralkyl group, provided that a 2-alkenyl group is excluded from the alkenyl group of R³; and R⁴ represents an alkyl group, an aryl group, an alkoxycarbonyl group or a cyano group.

2. The 7a-alkoxy-4H-pyrano[3,2-d]-oxazol-2(3H)-one according to Claim 1, wherein R¹ represents an alkyl group, a phenyl group or an aralkyl group, R² represents a hydrogen atom, an alkyl group, an alkenyl group, an aryl group or an aralkyl group, R³ represents an alkyl group, a cycloalkyl group or an aryl group, R⁴ represents an alkyl group or an aryl group.

3. The 7a-alkoxy-4H-pyrano[3,2-d]-oxazol-2(3H)-one according to Claim 1, wherein R¹ represents a benzyl group, a 1-phenylethyl group, a diphenylmethyl group, a phenyl group, a (1-naphthyl)methyl group or a 1-(1-naphthyl)ethyl group, R² represents a hydrogen atom, a methyl group, an ethyl

group, a n-propyl group or an isopropyl group, R³ represents a methyl group, an ethyl group, a n-propyl group, an isopropyl group, a tert-butyl group, a phenyl group, a cyclohexyl group, a menthyl group or an 8-phenylmenthyl group, R⁴ represents a methyl group, an ethyl group, a n-propyl group, an isopropyl group, an n-butyl group, an isobutyl group, a tert-butyl group or a phenyl group.

4. The 7a-alkoxy-4H-pyrano[3,2-d]-oxazol-2(3H)-one according to Claim 1, wherein the 7a-alkoxy-4H-pyrano[3,2-d]-oxazol-2(3H)-one represented by the formula (I) is at least one compound selected from the group consisting of:

3-diphenylmethyl-7a-methoxy-6-methyl-4H-pyrano[3,2-d]-oxazol-2(3H)-one;

3-diphenylmethyl-7a-ethoxy-6-methyl-4H-pyrano[3,2-d]-oxazol-2(3H)-one;

3-diphenylmethyl-7a-((1)-menthyloxy)-6-methyl-4H-pyrano[3,2-d]-oxazol-2(3H)-one;

3-diphenylmethyl-3a-methyl-7a-methoxy-6-methyl-4H-pyrano[3,2-d]-oxazol-2(3H)-one;

3-diphenylmethyl-7a-methoxy-6-ethyl-4H-pyrano[3,2-d]-oxazol-2(3H)-one;

3-diphenylmethyl-7a-methoxy-6-isopropyl-4H-pyrano[3,2-d]-oxazol-2(3H)-one;

3-diphenylmethyl-7a-methoxy-6-tert-butyl-4H-pyrano[3,2-d]-oxazol-2(3H)-one;

3-diphenylmethyl-7a-methoxy-6-methoxycarbonyl-4H-pyrano[3,2-d]-oxazol-2(3H)-one;

3-diphenylmethyl-7a-methoxy-6-isopropoxycarbonyl-4H-pyrano[3,2-d]-oxazol-2(3H)-one;

3-diphenylmethyl-7a-methoxy-6-ethoxycarbonyl-4H-pyrano[3,2-d]-oxazol-2(3H)-one;

3-diphenylmethyl-7a-methoxy-6-cyano-4H-pyrano[3,2-d]-oxazol-2(3H)-one;

3-diphenylmethyl-7a-methoxy-6-phenyl-4H-pyrano[3,2-d]-oxazol-2(3H)-one;

- 3-diphenylmethyl-7a-ethoxy-6-ethyl-4H-pyrano[3,2-d]-oxazol-
2(3H)-one;
- 3-diphenylmethyl-7a-ethoxy-6-isopropyl-4H-pyrano[3,2-d]-
oxazol-2(3H)-one;
- 5 3-diphenylmethyl-7a-ethoxy-6-tert-butyl-4H-pyrano[3,2-d]-
oxazol-2(3H)-one;
- 3-diphenylmethyl-7a-ethoxy-6-isobutyl-4H-pyrano[3,2-d]-
oxazol-2(3H)-one;
- 10 3-diphenylmethyl-7a-ethoxy-6-methoxycarbonyl-4H-pyrano[3,2-
d]-oxazol-2(3H)-one;
- 3-diphenylmethyl-7a-ethoxy-6-phenyl-4H-pyrano[3,2-d]-
oxazol-2(3H)-one;
- 3-(1-phenylethyl)-7a-methoxy-6-methyl-4H-pyrano[3,2-d]-
oxazol-2(3H)-one;
- 15 3-(1-phenylethyl)-7a-isopropoxy-6-methyl-4H-pyrano[3,2-d]-
oxazol-2(3H)-one;
- 3-(1-phenylethyl)-7a-((1)-menthyloxy)-6-methyl-4H-pyrano-
[3,2-d]-oxazol-2(3H)-one;
- 3-(1-phenylethyl)-7a-methoxy-6-ethyl-4H-pyrano[3,2-d]-
20 oxazol-2(3H)-one;
- 3-(1-phenylethyl)-7a-methoxy-6-(n-butyl)-4H-pyrano[3,2-d]-
oxazol-2(3H)-one;
- 3-benzyl-7a-methoxy-6-methyl-4H-pyrano[3,2-d]-oxazol-2(3H)-
one;
- 25 3-benzyl-7a-isopropoxy-6-methyl-4H-pyrano[3,2-d]-oxazol-
2(3H)-one;
- 3-benzyl-7a-((1)-menthyloxy)-6-methyl-4H-pyrano[3,2-d]-
oxazol-2(3H)-one;
- 3-benzyl-7a-methoxy-6-tert-butyl-4H-pyrano[3,2-d]-oxazol-
30 2(3H)-one;
- 3-benzyl-7a-methoxy-6-ethyl-4H-pyrano[3,2-d]-oxazol-2(3H)-
one;
- 3-benzyl-7a-methoxy-6-isopropyl-4H-pyrano[3,2-d]-oxazol-
2(3H)-one;
- 35 3-benzyl-7a-methoxy-6-methoxycarbonyl-4H-pyrano[3,2-d]-
oxazol-2(3H)-one;

3-benzyl-7a-methoxy-6-phenyl-4H-pyrano[3,2-d]-oxazol-2(3H)-one;

3-(1-naphthyl)methyl-7a-isopropoxy-6-methyl-4H-pyrano[3,2-d]-oxazol-2(3H)-one;

5 3-(1-naphthyl)methyl-7a-methoxy-6-ethyl-4H-pyrano[3,2-d]-oxazol-2(3H)-one;

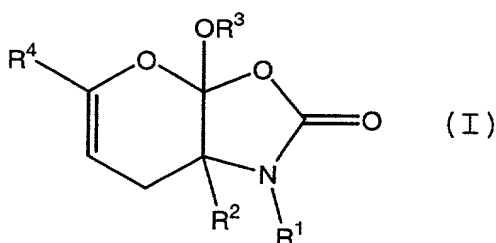
3-(1-naphthyl)methyl-7a-methoxy-6-tert-butyl-4H-pyrano[3,2-d]-oxazol-2(3H)-one;

10 3-(1-naphthyl)methyl-7a-methoxy-6-isopropyl-4H-pyrano[3,2-d]-oxazol-2(3H)-one;

3-(1-(1-naphthyl)ethyl)-7a-methoxy-6-methyl-4H-pyrano[3,2-d]-oxazol-2(3H)-one; and

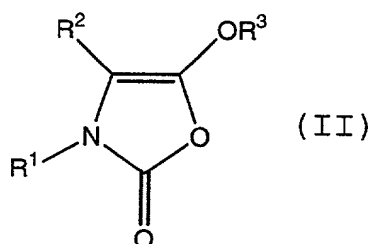
3-(1-(1-naphthyl)ethyl)-7a-methoxy-6-tert-butyl-4H-pyrano[3,2-d]-oxazol-2(3H)-one.

15 5. A process for producing a 7a-alkoxy-4H-pyrano[3,2-d]-oxazol-2(3H)-one represented by the formula (I):

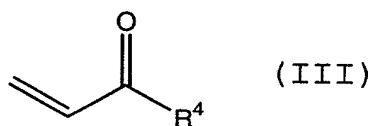


wherein R¹ represents a hydrogen atom, an alkyl group, an alkenyl group, an aryl group or an aralkyl group; R² represents a hydrogen atom, an alkyl group, an alkenyl group, an aryl group or an aralkyl group; R³ represents an alkyl group, a cycloalkyl group, an alkenyl group, an aryl group or an aralkyl group, provided that a 2-alkenyl group is excluded from the alkenyl group of R³; and R⁴ represents an alkyl group, an aryl group, an alkoxy carbonyl group or a cyano group,

which comprises reacting a 5-alkoxy-2(3H)-oxazolone represented by the formula (II):



wherein R¹, R² and R³ are the same as defined above, with an α,β-unsaturated ketone represented by the formula (III):



wherein R⁴ is the same as defined above, in an organic solvent in the presence of a Lewis acid.

6. The process for producing a 7a-alkoxy-4H-pyrano[3,2-d]-oxazol-2(3H)-one according to Claim 5, wherein the Lewis acid is represented by the formula (IV):



wherein R⁵, R⁶ and R⁷ each independently represent an alkyl group having 1 to 6 carbon atoms and Tf represents a trifluoromethanesulfonyl group.